

WHAT IS CLAIMED IS:

1. A method for driving a nematic liquid crystal in a liquid crystal display device comprising a nematic crystal having no prior hysteresis, two electrodes sandwiching the nematic liquid crystal and two polarizing plates sandwiching the two electrodes, comprising the steps of:

applying a first voltage corresponding to image data and applying a second voltage of a predetermined value independent from the image data between said two electrodes within each of unit periods, said units periods repeating periodically, said first voltage being applied in a first time zone of each said unit period and said second voltage being applied in a second separate time zone in the same unit period,

wherein the proportion between the first time zone and the second time zone in each said unit period is constant in all said unit periods.

2. The method according to Claim 1 wherein the first voltage applied to said two electrodes is inverted in polarity within each said first time zone to average the voltage values applied as the first voltage to substantially zero.

3. The method according to Claim 1 wherein the first voltage is applied in the first time zone of each said unit period to display an image on a panel of said liquid crystal display device, and the second voltage is applied in the second time zone of the same unit period to erase the image on the panel during the second time zone.

4. The method according to Claim 3 wherein erasure of the image displayed on the panel is effected by driving the liquid crystal to display black on the panel.

5. The method according to Claim 1 wherein the liquid crystal is driven to a state corresponding to the image data by the first voltage applied in the first time zone of each said unit period, and the nematic liquid crystal is driven to return to a predetermined state by the second voltage applied in the second time zone of the same unit period.

6. The method according to Claim 5 wherein the predetermined state of the nematic liquid crystal is a state displaying substantially black on the panel.

7. The method according to Claim 3 wherein the liquid crystal display device is normally black and the second voltage is zero volts.

8. A method of driving a liquid crystal display device, comprising:

applying a voltage corresponding to image data for each pixel to display on a TFT liquid crystal panel in each of unit periods; and

applying a predetermined voltage for each pixel to erase the image on the TFT liquid crystal panel in the same unit period.

9. The method according to Claim 8 wherein the voltage corresponding to the image data is inverted in polarity in each said unit period to average the voltage values applied as the voltage corresponding to the image data to zero volts within each said unit period.

10. The method according to Claim 9 wherein the erasure of the image on the TFT liquid crystal panel is effected by darkening the TFT liquid crystal panel to substantially black.

11. An image display method in a liquid crystal display device including a matrix liquid crystal panel using a nematic liquid crystal, comprising:

applying a first voltage corresponding to image data to the liquid crystal in a first time zone in a unit period; and

applying a second voltage having a predetermined potential and independent from the image data to the liquid crystal in a second time zone different from the first time zone in the same unit period.

12. The method according to Claim 11 wherein the matrix liquid crystal panel is a simple matrix liquid crystal panel.

13. The method according to Claim 11 wherein the matrix liquid crystal panel is a TFT liquid crystal panel.

14. A method for driving a nematic liquid crystal in a liquid crystal display device that includes a nematic liquid crystal that is free from an optical effect of hysteresis and has no metastable states, two electrodes confining the nematic liquid crystal and a pair of polarizing plates sandwiching the electrodes confining the nematic liquid crystal, comprising:

applying a first voltage corresponding to image data across the two electrodes of the liquid crystal during a first predetermined time period in an interval; and

applying a second voltage having an absolute value of zero during a second separate predetermined time period in the interval;

wherein each of the intervals includes a separate first input of the first voltage and a second input of

the second voltage, and wherein the optical transmittance of the liquid crystal returns to or remains at an original level during each of the intervals.

15. The method for driving a nematic liquid crystal according to Claim 14, wherein each of the intervals lasts for the same length of time and is less than or equal to eight milliseconds.

16. The method for driving a nematic liquid crystal according to Claim 15, wherein the first voltage applied across the two electrodes during the first time period is inverted in polarity so that the average value of the first voltage is substantially zero for each of the first time periods.

17. The method for driving a nematic liquid crystal according to Claim 14, wherein the second time period has a greater duration than the first time period, and the first and second time periods, which do not overlap, combined equal the entirety for each of the intervals, the first time period and the second time period having the same length of time during each said interval, and the intervals each having the same length of time.

18. The method for driving a nematic liquid crystal according to Claim 14, wherein the nematic liquid crystal display device comprises a TFT nematic liquid crystal display device that is optically responsive to changes in the first voltage.

19. The method for driving a nematic liquid crystal according to Claim 14, wherein optical transmittance is determined by the first voltage.